Riparian Rule Talking Points, Background, and Questions *- Draft May 20, 2014*

This is a working draft of overall topic areas and background needed to develop EPA talking points for the June 18-19 Environmental Quality Commission (EQC) meeting in Salem, OR and for the June 23 Board of Forestry (BOF). I have nested questions from DEQ and BOF and some preliminary responses in these topic areas.

I would suggest we come up with our talking points, then check if they are responsive to the questions. Then we can strategize what we want to present and what we want to have answers to in case we are asked.

Main Points

- *Speak to importance of protecting cold water for fish. Environmental Benefits to Riparian Rule and Need for Rule.*
- *EPA's Support of Riparian Rule for small and medium fish-bearing streams*

Topics:

Attachment 1: Importance of Protecting Cold Water: Temperature Guidance (John, Dru, NOAA, others)
Attachment 2: Environmental Benefits to Riparian Rule (All)
Attachment 3: Riparian Rule and Regulatory Authorities – WQS, TMDLs, CZARA (Rochelle, Jenny, Alan, Others)
Attachment 4: Where Riparian Rules Apply (Rochelle, Jenny, Alan, Others)
Attachment 5: RipStream and Paired Watershed Study (Peter, All)
Attachment 6: Additional Rulemaking for Type N Streams (?)

Att. 1: Importance of Protecting Cold Water: Temperature Guidance

Talking Points

- High water temperatures are a major factor harming salmon. Those endangered and threatened ESA salmonids and other salmonids need cold water to survive. Numerous scientific studies of habitat and high temperature impacts on salmon, steelhead, and resident native fish have been completed over the past two decades. These indicate that high temperatures are a major factor contributing to salmon decline (*PNW Temp Guidance, p. 10*). The high quality, thermally optimal waters that do exist are likely vital for the survival of ESA-listed salmonids (*PNW Temp Guidance, 2003, p.32*).

- Background on Temp Project. Knowing that high temperatures threaten and endanger salmonid species in Oregon, EPA started the Temperature Project from 2000-2003. This was an interdisciplinary team of water quality specialists, fish biologists, hydrologists, geomorphologists, ecologists, and other scientists from multiple agencies and organizations. The goal of the project was to use the most recent scientific studies to develop guidelines for developing water quality standards. These incorporated understanding what types of temperatures and thermal regimes salmon need to survive and thrive. Six scientific papers incorporated information from hundreds of studies to provide the scientific and technical foundation for the guidance, and two independent interdisciplinary scientific peer review reviewed and commented on the guidance and the scientific issue papers.

- The Temperature Project concluded that the most important factor for salmon are cold water and a return to a natural thermal regime. The mix of numeric and narrative criteria were intended as anchor points to protect and restore the natural thermal regime.

- A major assumption of the temperature numeric WQS is that water is cold in the headwaters and will deliver colder water downstream where temperatures may be naturally higher. It also assumes this cold water will be delivered during the late spring and early fall ("shoulder seasons") when salmonid spawning occurs. Therefore, the temperature guidance chose temperatures that were on the *higher* end of optimal, *assuming* that cold water upstream will be delivered downstream at all times of the year, especially critical shoulder season months. So PCW and cold water in upstream areas is necessary for the numeric criteria to be effective.

- Although EPA was challenged on our approval of DEQ's temperature WQS, EPA prevailed in 2012 on the numeric water quality standards because of how the temperature standard worked as a whole to restore the natural thermal regime. Cold water delivered downstream spatially and seasonally was key to the U.S. District Court upholding the biological basis behind the numeric criteria.

- Existing cold water helps ensure that downstream temperatures are able to meet standards.

- With climate change, the warmer temperatures will likely reduce salmon habitat making protecting areas with cold water even more critical.

Other Background for Responses

***What ODEQ wants EPA to Address**: Construct behind PCW [answered above], Intent of the 0.3°C human use allowance, How anti-deg provision is intended to protect the natural thermal regime which protects the natural resources [answered above], the scientific underpinning for taking a NTP approach and how PCW fits into this construct [answered above]*

BOF: What is the biological basis of the PCW standard (BOF question) [*Answered above]*?

Att. 2: Environmental Benefits to Riparian Rule

Talking Points

Other Background for Responses
ODEQ: Clarification on how WA rule allowing for 2.8 degrees increase really applies to forestry
EPA: Temperature impairments, salmon studies, Oregon Plan, RipStream, CZARA

Att. 3: Riparian Rule and Regulatory Authorities (WQS, TMDLs, CZARA)

Talking Points

Water Quality Standards

- The goals of the Clean Water Act are to protect and restore our nation's waters.
- Briefly, OR's temperature standard was derived from EPA's Pacific Northwest Temperature Guidance (2003). This Guidance, in turn, was based upon hundreds of studies on salmonid life stages' biological thresholds for temperature—where injury and mortality are prevented in the target organism.
- Biologically-based pollutant criteria, including the temperature criteria, are chosen to be protective of the defined uses for the streams; in this case, to support an aquatic life use - fish. It does not make sense to choose criteria that do not protect the use or result in unacceptable mortality or injury to the use such that the goal cannot be achieved.
- The temperature criteria identified in the guidance and adopted by Oregon work together to encompass the thermal complexity of streams.
- While the numeric criteria are from the upper ends of the ranges found to be protective of the aquatic life uses, the protecting cold water narrative, and other narratives, enable such criteria to be fully protective, since fish are reliant on cold water areas ('refuges') for maintaining a healthy life cycle, and together, the criteria protect the bulk stream temperatures from being too warm in the short and long term, so that fish can survive, but the colder waters enable the population as a whole to not only survive but to be self-propagating.
- [The State determines how and where it will apply its Riparian Rule for nonpoint sources, but it is consistent with the PCW WQS.]
- [Anti-deg language]
- Per Oregon's approved rule language that is in effect for CWA purposes, the PCW applies where T&E species are present; areas upstream of where T&E species are present, and where critical habitat is present.
- There is no map currently adopted into standards – it is a narrative use. The other temperature criteria apply to the designated use maps adopted into Oregon regulations. There are year-round fish uses as well as spawning use maps for criteria that apply for specific times of year. There are typically two maps per basin unless no salmonid uses occur in a particular basin. Other aquatic life, beyond salmonids, are sensitive to temperature, however, OR identified salmonids as the most sensitive to temperature, and so salmonids (salmon, steelhead, trout, and bull trout) comprise the use that is designated in the maps for OR waters. The other aspects of water quality standards that are relevant include OR's antidegradation policy in effect for Clean Water Act purposes. Before any degradation of a waterbody with water quality that is better than the criteria is allowed, federal regulations state that, "the State shall assure that there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control." Further, under the federal regulations, any degradation that is allowed must still provide water quality sufficient to protect existing uses fully.

- **we could also show Dan Isaak model or Tim Beechie output, and speak to colder waters as a hedge against climate change and the fact that colder waters could be most impacted..
-

Other Background for Responses
BOF: What are the respective authorities/obligations on the issue of forest management and protecting water quality?

Answer: Water quality standards apply to the waterbody, not the regulated source. In terms of ensuring compliance with WQS, OR has the authority to regulate NPS in their state statutes, and ODEQ, in particular, has the authority to enforce the laws on OR's books. [something need to add that OR use sound science in making decisions about achieving WQS?]. Have to protect existing uses (add?).

TMDLs

CZARA
- EPA and NOAA jointly administer the Coastal Nonpoint Program (CNP), which is part of the …
- As part of
- The Riparian Rule will be useful to address a deficiency identified in EPA and NOAA's proposed notice of intent to disapprove Oregon's Coastal Nonpoint Program. The

Other Background for Responses
BOF: Does this riparian rule process relate to the NOAA/EPA proposal to disapprove the State of Oregon's coastal nonpoint pollution control program, if so, how? *[**will be answered above**]*

Is the concept of drafting the rule keyed on where the PCW standard has been established a legally defensible approach to meeting our Clean Water Act obligations? ***[Will be answered above]***

Att. 4: Where Riparian Rules Apply

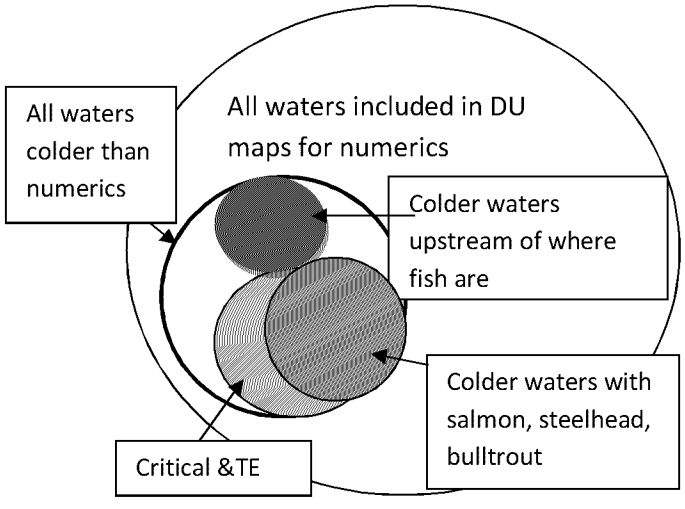
Oregon's Designated Uses and implementation of protecting cold water designated uses vs. the riparian rule mapping:

Talking Points

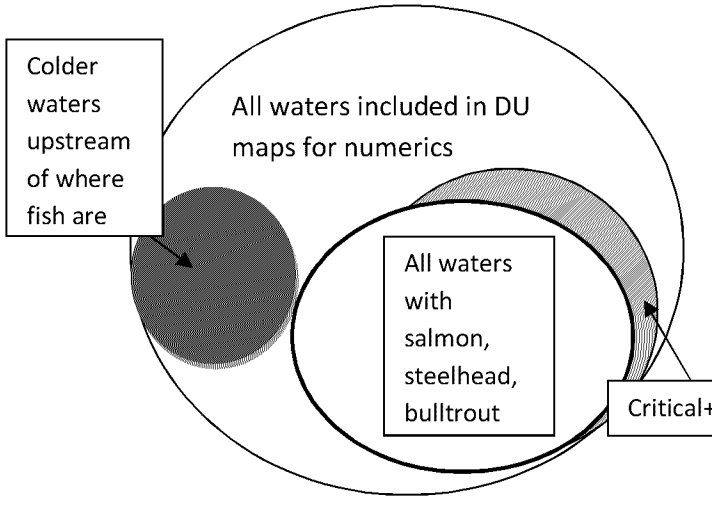
- We support the approach that the State is proposing on where the riparian rules should apply. [RL]
- We commend OR for using published and peer reviewed scientific data in guiding the application of its nonpoint source rules and BMPS. [RL]
- We feel OR's application of the riparian rules is to the highest priority areas; however, we encourage OR to consider applying the rules more broadly to ensure restoration and protection of aquatic life. [RL]
- [Some language on how it might be consistent with the concepts of protecting cold water in temp guidance.]
- [Some language on how it supports an important part of the Coastal Nonpoint Program.]

Other Background for Responses

Protecting cold water conversation w/ODEQ)



ODEQ application of riparian rules (per



BOF: How do ODF and DEQ identify the geographic extent of the Protecting Coldwater Criterion, including where throughout the state (including eastern Oregon) the PCW standard is in force? [State answer] How far upstream of reaches covered by the PCW standard should any riparian rule be applied to ensure we're not sabotaging our ability to meet the standard?

Att. 5: RipStream and Paired Watershed Studies

The Paired Watershed study will be discussed. We will want to be somewhat informed regarding the findings from this study although Josh is going to present information to the EQC on this.

Talking Points

Other Background for Responses

Att.6: Additional Rulemaking for Other Streams

Talking Points

Other Background for Responses

Riparian Rule Talking Points, Background, and Questions **-** *Draft May 20, 2014*

This is a working draft of overall topic areas and background needed to develop EPA talking points for the June 18-19 Environmental Quality Commission (EQC) meeting in Salem, OR and for the June 23 Board of Forestry (BOF). I have nested questions from DEQ and BOF and some preliminary responses in these topic areas.

I would suggest we come up with our talking points, then check if they are responsive to the questions. Then we can strategize what we want to present and what we want to have answers to in case we are asked.

Main Points

- *Speak to importance of protecting cold water for fish. Environmental Benefits to Riparian Rule and Need for Rule.*
- *EPA's Support of Riparian Rule for small and medium fish-bearing streams*

Topics:

Attachment 1: Importance of Protecting Cold Water: Temperature Guidance (John, Dru, NOAA, others)
Attachment 2: Environmental Benefits to Riparian Rule (All)
Attachment 3: Riparian Rule and Regulatory Authorities – WQS, TMDLs, CZARA (Rochelle, Jenny, Alan, Others)
Attachment 4: Where Riparian Rules Apply (Rochelle, Jenny, Alan, Others)
Attachment 5: RipStream and Paired Watershed Study (Peter, All)
Attachment 6: Additional Rulemaking for Type N Streams (?)

Att. 1: Importance of Protecting Cold Water: Temperature Guidance

Talking Points

- High water temperatures are a major factor harming salmon. Those endangered and threatened ESA salmonids and other salmonids need cold water to survive. Numerous scientific studies of habitat and high temperature impacts on salmon, steelhead, and resident native fish have been completed over the past two decades. These indicate that high temperatures are a major factor contributing to salmon decline (*PNW Temp Guidance, p. 10*). The high quality, thermally optimal waters that do exist are likely vital for the survival of ESA-listed salmonids (*PNW Temp Guidance, 2003, p.32*).

- Background on Temp Project. Knowing that high temperatures threaten and endanger salmonid species in Oregon, EPA started the Temperature Project from 2000-2003. This was an interdisciplinary team of water quality specialists, fish biologists, hydrologists, geomorphologists, ecologists, and other scientists from multiple agencies and organizations. The goal of the project was to use the most recent scientific studies to develop guidelines for developing water quality standards. These incorporated understanding what types of temperatures and thermal regimes salmon need to survive and thrive. Six scientific papers incorporated information from hundreds of studies to provide the scientific and technical foundation for the guidance, and two independent interdisciplinary scientific peer review reviewed and commented on the guidance and the scientific issue papers.

- The Temperature Project concluded that the most important factor for salmon are cold water and a return to a natural thermal regime. The mix of numeric and narrative criteria were intended as anchor points to protect and restore the natural thermal regime.

- A major assumption of the temperature numeric WQS is that water is cold in the headwaters and will deliver colder water downstream where temperatures may be naturally higher. It also assumes this cold water will be delivered during the late spring and early fall ("shoulder seasons") when salmonid spawning occurs. Therefore, the temperature guidance chose temperatures that were on the *higher* end of optimal, *assuming* that cold water upstream will be delivered downstream at all times of the year, especially critical shoulder season months. So PCW and cold water in upstream areas is necessary for the numeric criteria to be effective.

- Although EPA was challenged on our approval of DEQ's temperature WQS, EPA prevailed in 2012 on the numeric water quality standards because of how the temperature standard worked as a whole to restore the natural thermal regime. Cold water delivered downstream spatially and seasonally was key to the U.S. District Court upholding the biological basis behind the numeric criteria.

- Existing cold water helps ensure that downstream temperatures are able to meet standards.

- With climate change, the warmer temperatures will likely reduce salmon habitat making protecting areas with cold water even more critical.

Other Background for Responses

***What ODEQ wants EPA to Address**: Construct behind PCW [answered above], Intent of the 0.3°C human use allowance, How anti-deg provision is intended to protect the natural thermal regime which protects the natural resources [answered above], the scientific underpinning for taking a NTP approach and how PCW fits into this construct [answered above]*

BOF: What is the biological basis of the PCW standard (BOF question) [*Answered above]*?

Att. 2: Environmental Benefits to Riparian Rule

Talking Points

Other Background for Responses
ODEQ: Clarification on how WA rule allowing for 2.8 degrees increase really applies to forestry
EPA: Temperature impairments, salmon studies, Oregon Plan, RipStream, CZARA

Att. 3: Riparian Rule and Regulatory Authorities (WQS, TMDLs, CZARA)

Talking Points

Water Quality Standards

- The goals of the Clean Water Act are to protect and restore our nation's waters.
- Briefly, OR's temperature standard was derived from EPA's Pacific Northwest Temperature Guidance (2003). This Guidance, in turn, was based upon hundreds of studies on salmonid life stages' biological thresholds for temperature—where injury and mortality are prevented in the target organism.
- Biologically-based pollutant criteria, including the temperature criteria, are chosen to be protective of the defined uses for the streams; in this case, to support an aquatic life use - fish. It does not make sense to choose criteria that do not protect the use or result in unacceptable mortality or injury to the use such that the goal cannot be achieved.
- The temperature criteria identified in the guidance and adopted by Oregon work together to encompass the thermal complexity of streams.
- While the numeric criteria are from the upper ends of the ranges found to be protective of the aquatic life uses, the protecting cold water narrative, and other narratives, enable such criteria to be fully protective, since fish are reliant on cold water areas ('refuges') for maintaining a healthy life cycle, and together, the criteria protect the bulk stream temperatures from being too warm in the short and long term, so that fish can survive, but the colder waters enable the population as a whole to not only survive but to be self-propagating.
- [The State determines how and where it will apply its Riparian Rule for nonpoint sources, but it is consistent with the PCW WQS.]
- [Anti-deg language]
- Per Oregon's approved rule language that is in effect for CWA purposes, the PCW applies where T&E species are present; areas upstream of where T&E species are present, and where critical habitat is present.
- There is no map currently adopted into standards – it is a narrative use. The other temperature criteria apply to the designated use maps adopted into Oregon regulations. There are year-round fish uses as well as spawning use maps for criteria that apply for specific times of year. There are typically two maps per basin unless no salmonid uses occur in a particular basin. Other aquatic life, beyond salmonids, are sensitive to temperature, however, OR identified salmonids as the most sensitive to temperature, and so salmonids (salmon, steelhead, trout, and bull trout) comprise the use that is designated in the maps for OR waters. The other aspects of water quality standards that are relevant include OR's antidegradation policy in effect for Clean Water Act purposes. Before any degradation of a waterbody with water quality that is better than the criteria is allowed, federal regulations state that, "the State shall assure that there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control." Further, under the federal regulations, any degradation that is allowed must still provide water quality sufficient to protect existing uses fully.

Comment [R1]: Bring copies

Comment [WJ2]: Rochelle, can you look at this and work on the language of how we answer the question: does the Riparian Rule meet WQS?

Comment [R3]: I am not speaking to where colder than since it is implicit in the name of the narrative

Comment [WJ4]: Rochelle, I'm going to let you take a crack at this. This is again related to BOF's question of whether the Riparian Rule meets WQS obligations. Let me know if you want to talk more.

- **we could also show Dan Isaak model or Tim Beechie output, and speak to colder waters as a hedge against climate change and the fact that colder waters could be most impacted..
-

Other Background for Responses
BOF: What are the respective authorities/obligations on the issue of forest management and protecting water quality?

Answer: Water quality standards apply to the waterbody, not the regulated source. In terms of ensuring compliance with WQS, OR has the authority to regulate NPS in their state statutes, and ODEQ, in particular, has the authority to enforce the laws on OR's books. [something need to add that OR use sound science in making decisions about achieving WQS?]. Have to protect existing uses (add?).

TMDLs

CZARA
- EPA and NOAA jointly administer the Coastal Nonpoint Program (CNP), which is part of the …
- As part of
- The Riparian Rule will be useful to address a deficiency identified in EPA and NOAA's proposed notice of intent to disapprove Oregon's Coastal Nonpoint Program. The

Other Background for Responses
BOF: Does this riparian rule process relate to the NOAA/EPA proposal to disapprove the State of Oregon's coastal nonpoint pollution control program, if so, how? *[**will be answered above**]*

Is the concept of drafting the rule keyed on where the PCW standard has been established a legally defensible approach to meeting our Clean Water Act obligations? ***[Will be answered above]***

Att. 4: Where Riparian Rules Apply

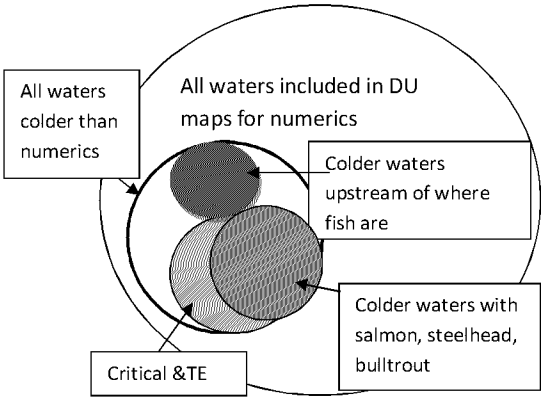
Oregon's Designated Uses and implementation of protecting cold water designated uses vs. the riparian rule mapping:

Talking Points

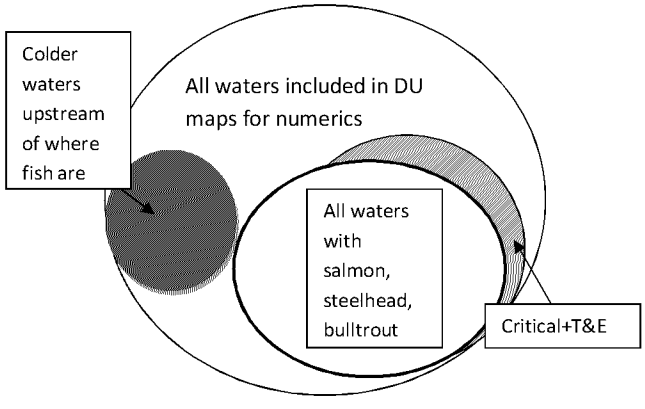
- We support the approach that the State is proposing on where the riparian rules should apply. [RL]
- We commend OR for using published and peer reviewed scientific data in guiding the application of its nonpoint source rules and BMPS. [RL]
- We feel OR's application of the riparian rules is to the highest priority areas; however, we encourage OR to consider applying the rules more broadly to ensure restoration and protection of aquatic life. [RL]
- [Some language on how it might be consistent with the concepts of protecting cold water in temp guidance.]
- [Some language on how it supports an important part of the Coastal Nonpoint Program.]

Other Background for Responses

Protecting cold water conversation w/ODEQ)



ODEQ application of riparian rules (per



BOF: How do ODF and DEQ identify the geographic extent of the Protecting Coldwater Criterion, including where throughout the state (including eastern Oregon) the PCW standard is in force? [State answer] How far upstream of reaches covered by the PCW standard should any riparian rule be applied to ensure we're not sabotaging our ability to meet the standard?

Att. 5: RipStream and Paired Watershed Studies

The Paired Watershed study will be discussed. We will want to be somewhat informed regarding the findings from this study although Josh is going to present information to the EQC on this.

Talking Points

Other Background for Responses

Att.6: Additional Rulemaking for Other Streams

Talking Points

Other Background for Responses